

# Water Heater Unit



Feel the drive

**Thermo Top E Auxiliary Heating**  00 0003

**Thermo Top C Auxiliary Heating**  00 0002

**Thermo Top P Auxiliary Heating**  00 0104

## Installation Instructions

### VW Fox

Gasoline

From model year 2006

For left-hand drive vehicles only



#### **WARNING!**

**Hazard warning:**

**Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.**

**Specialist company training, technical documentation, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.**

**NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills or if you do not have access to the required technical documentation, tools and equipment to carry out correct installation and repairs.**

**ALWAYS follow all Webasto installation and repair instructions and observe all warning instructions.**

**Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.**

**Table of Contents**

Validity	2	Preparing the Heater Unit	10
Heater Unit / Installation Kit	3	Preparing the Installation Location	11
Foreword	3	Installing the Heater Unit	11
General Instructions	3	Combustion Air	13
Special Tools	3	Exhaust System	14
Explanatory Notes on the Document	4	Water Connection	15
Preliminary Work	5	Fuel Connection	19
Heater Unit Installation Location	5	Final Work	21
Electrical Connections	6	Final Work	21
Climatic blower control	7	Operating instructions for the end customer	22
Remote Start Option	8	Tank Extracting Device Template	23
Thermo Call Option	9		

**Validity**

Manufacturer	Model	Type	EG-BE No. / ABE
VW	Fox	5Z	e1 * 2001 / 116 * 0301 * ...

Engine type	Engine	Power in kW	Engine capacity in cm <sup>3</sup>
BMD	Gasoline	40	1198
BKR	Gasoline	55	1390

Vehicle and engine types, equipment variants as well as national specifications, which are not listed in these installation instructions, have not been tested. Installation according to these installation instructions may, however, be possible.

The installation location of a time switch and summer / winter switch should be confirmed with the end customer before installation.

## Heater Unit / Installation Kit

Amount	Description	Order no.:
1	Commercial supply of required control	See price list
1	Installation kit for VW Polo / Fox Gasoline	9015515B

### Recommended heater unit for the relevant vehicle class:

Vehicle	Heater unit
Compact car	Thermo Top E
Mid-class, station wagon	Thermo Top C
Luxury, van, off-roader	Thermo Top P

Select the heater unit based on the size of the vehicle passenger compartment and the customer's comfort requirements.



### Foreword

These installation instructions apply to vehicles VW Fox with Gasoline engines – re. validity, see page 2 – from model year 2006 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. – Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to these installation instructions.

However, the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Thermo Top C/P/E* are to be observed in any event.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

### General Instructions

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and cable harnesses to original vehicle lines and cable harnesses using cable clips.

Sharp edges should be fitted with edge protectors (split open plastic hose).

Spray unfinished body areas, such as bore holes, with anti-corrosion wax (Tectyl 100K, Order no. 111329).

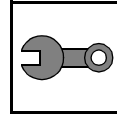
### Special Tools

- Torque wrench
- Vise-grip wrench

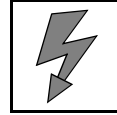
## Explanatory Notes on the Document

To provide you with a quick overview of the individual working steps, you will find an identification mark on the outside top right corner of the page in question.

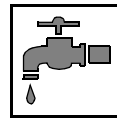
### Mechanics



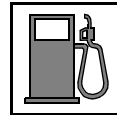
### Electrics



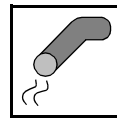
### Water connection



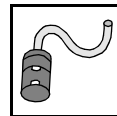
### Fuel connection



### Exhaust system



### Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



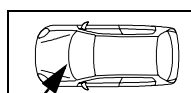
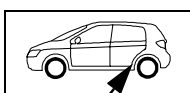
Specific risk of fire or explosion.



Reference to general installation instructions of Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature.

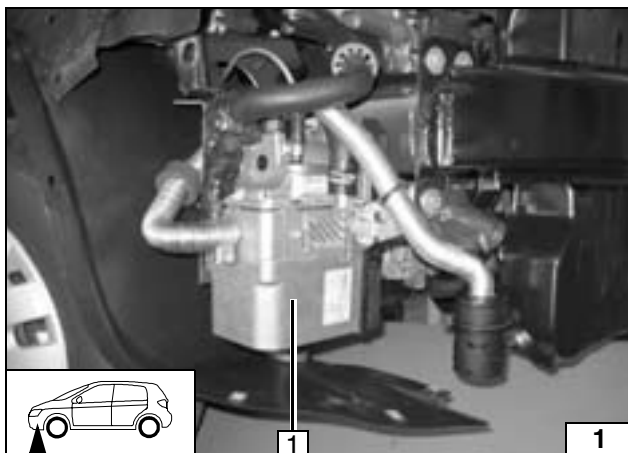


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

**Preliminary Work**

**WARNING!**

- Disconnect the battery.
- Let off pressure in the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the engine cover.
- Remove the windshield wiper arms.
- Remove the wiper assembly.
- Remove the cooling water reservoir cover
- Remove the motor controller unit mounting
- Remove the silencer mat from the engine compartment separating wall.
- Remove the water reservoir separating panel to the engine compartment.
- Open the tank cap, ventilate the tank.
- Close the tank cap again.
- Loosen the right and left wheel-house panel.
- Remove the underride protection.
- Remove the bumper.
- Remove the right underbody panel.
- Lift up the rear seat bench.
- Open the tank mounting service lid
- Remove tank mounting according to manufacturer's instructions.
- Remove the glove compartment (only for Thermo Call).
- Remove the lower dashboard panel on the driver's side.
- Loosen the central electrics.
- Remove air conditioning control according to the manufacturer's instructions (only for Climatronic systems).
- Please remove page 25 "Operating instructions for the end customer" and add this to the operating instructions.



**Heater Unit Installation Location**

1 Heater unit

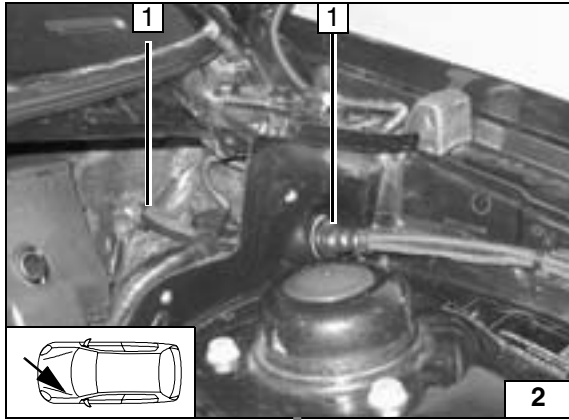
**Installation location**



## Electrical Connections

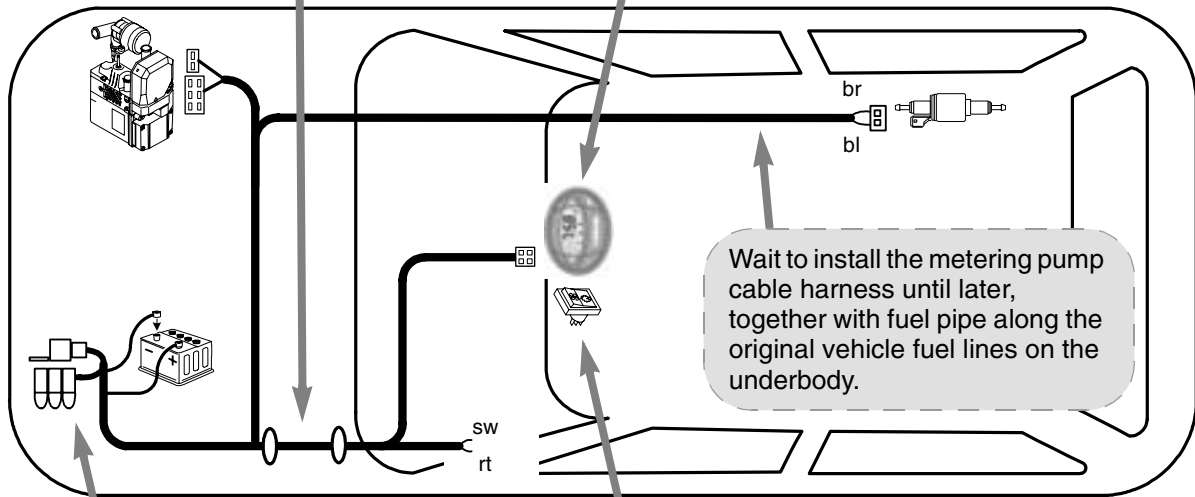
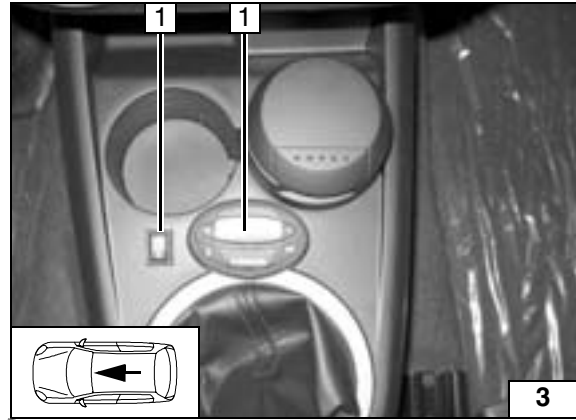
### Cable harness feed-through

1 Bowden cable rubber sleeve

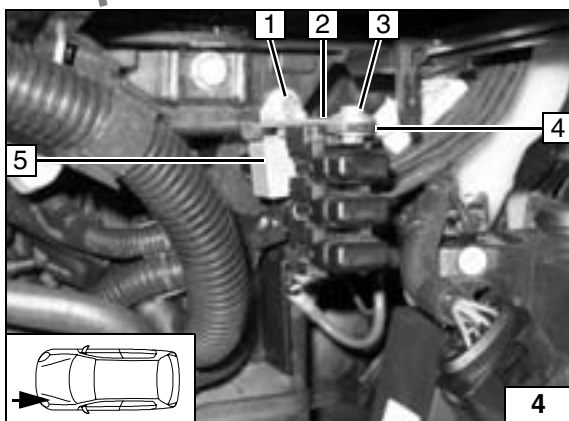


### Time switch

1 Time switch

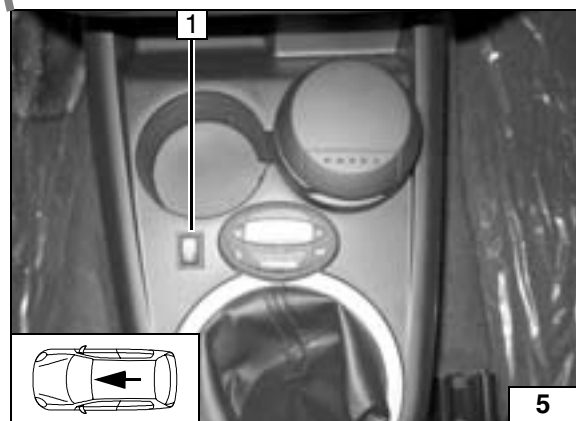


Cable harness installation diagram



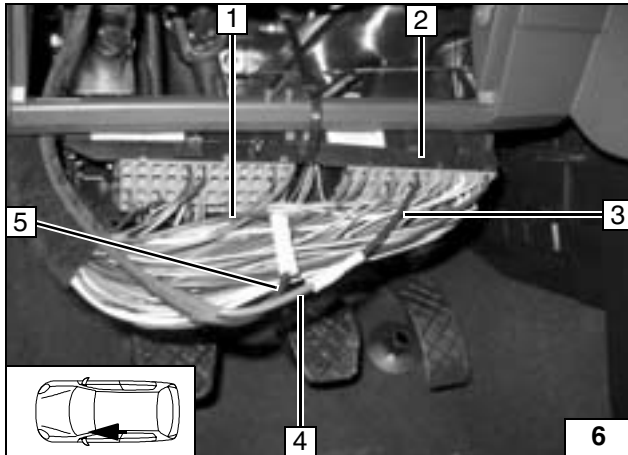
### Fuse holder, K3 relay

- 2 Fastening strap with holes, with 90° bend
- 1 M5x20 bolt, body washer, M5 flanged nut
- 5 K3 relay, M5x12 bolt, washer, flanged nut
- 4 Fuse holder
- 3 M5x12 bolt, washer, M5 flanged nut



### Summer / winter switch option

- 1 Summer / winter switch, bore hole Ø 12 mm.



**Climatic blower control**

Connection to the central electrics 2.  
Connect according to the circuit diagram.

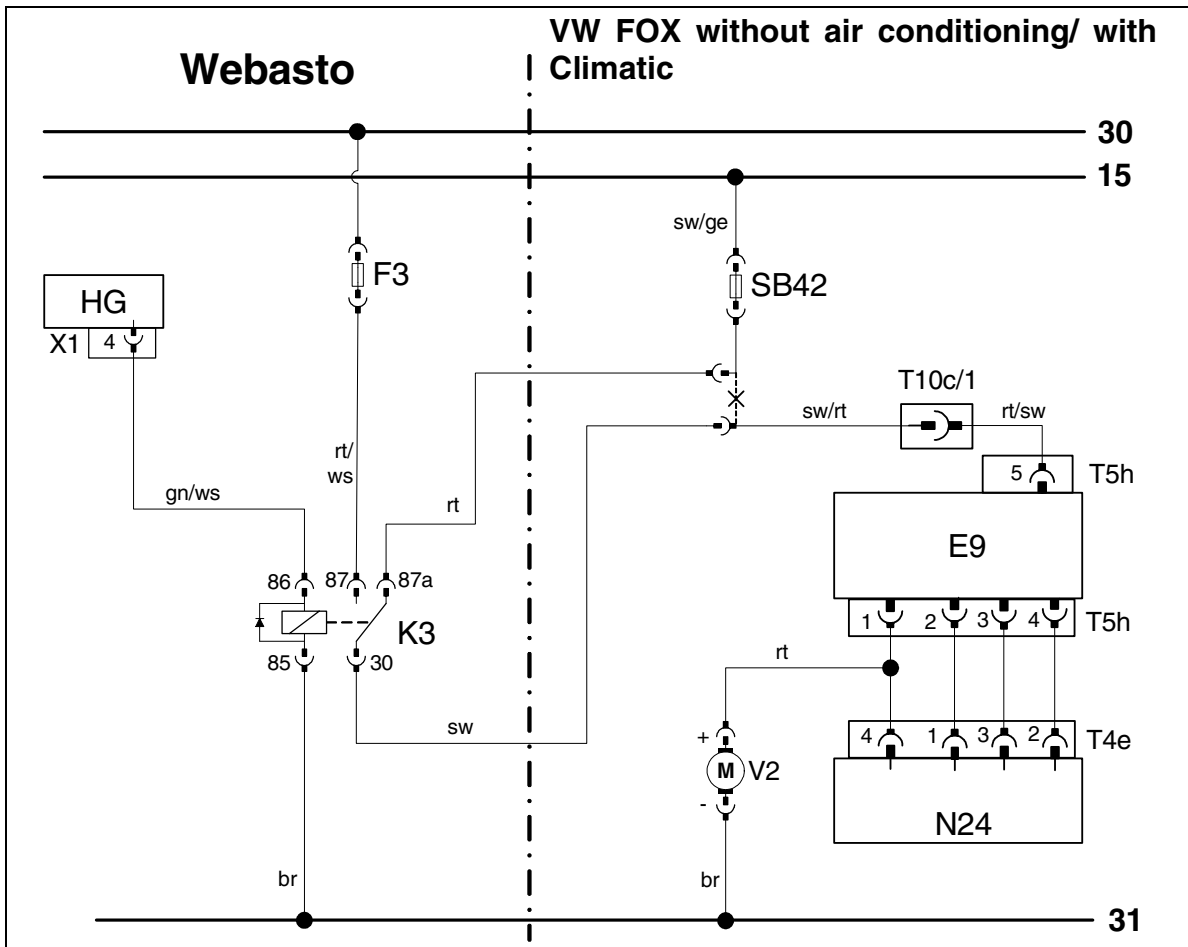
- 3 Red/black (rt/sw) wire from fuse SB42 25A.
- 1 Black/red (sw/rt) wire to the switch unit.
- 5 Black (sw) wire from K3/30
- 4 Red (rt) wire to K3/87a



**Connecting the central electronics**

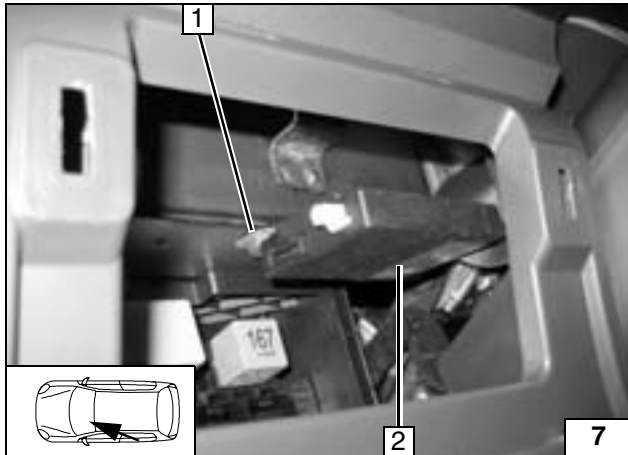


**Manual air conditioning circuit diagram**



Webasto components		Components VW Fox		Colors and symbols	
HG	Heater unit TT-C/E/P	V2	Blower motor	rt	red
X1	6-pin connector	SB42	Fuse, 25A	ws	white
F3	Fuse, 25A	N24	Resistor group	sw	black
K3	Blower relay	E9	Switch unit	br	brown
		T...	connector	gn	green
				ge	yellow
				X	Splitting point
					Cable colors may vary.

**Legend**



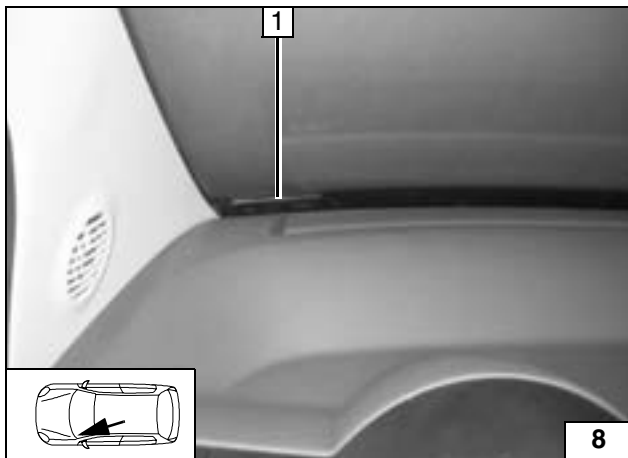
**Remote Start Option**

Drill bracket at position 1 to Ø 6.5 mm.

- 2 Receiver
- 1 M6x20 bolt, bracket on existing threaded bore hole

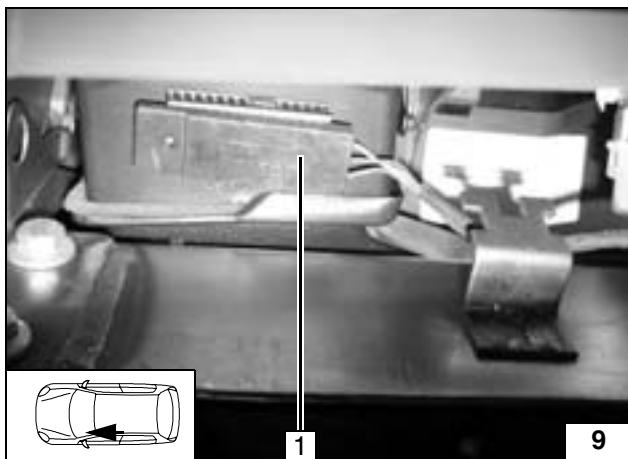


**Assembling the receiver**



- 1 Antenna

**Assembling the antenna**



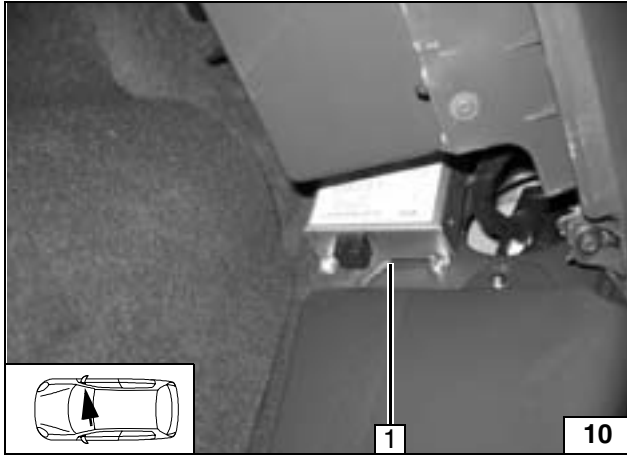
**Temperature sensor for HTM100 only**

Fasten temperature sensor 1 correctly as shown in the figure.



**Assembling the temperature sensor**



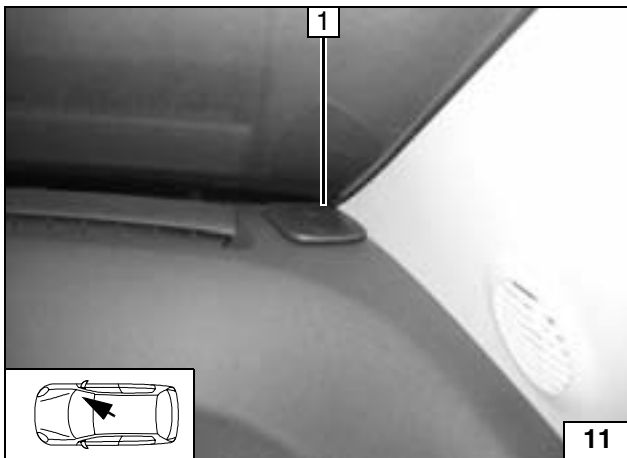


**Thermo Call Option**

Fasten the TC receiver 1 on the A-pillar as shown in the image, the fastening material is not a component of delivery.



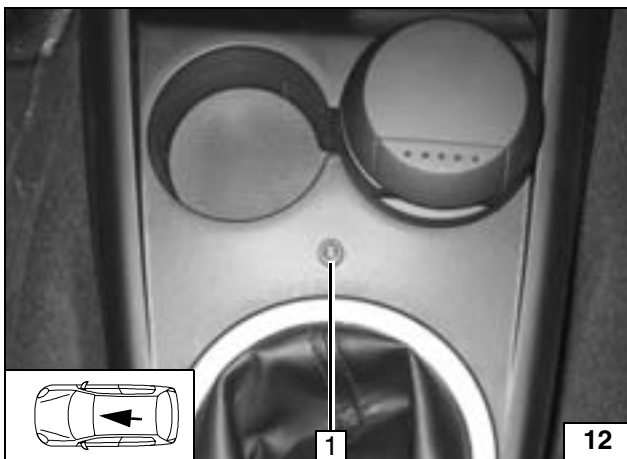
**Assembling the receiver**



1 Antenna



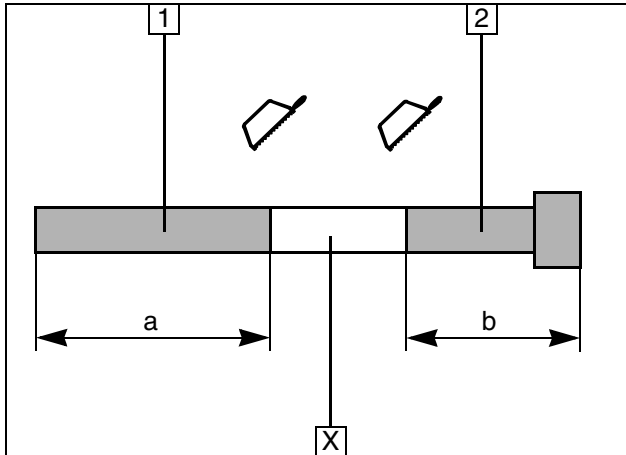
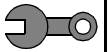
**Assembling the antenna**



1 Tip switch



**Assembling the tip switch**



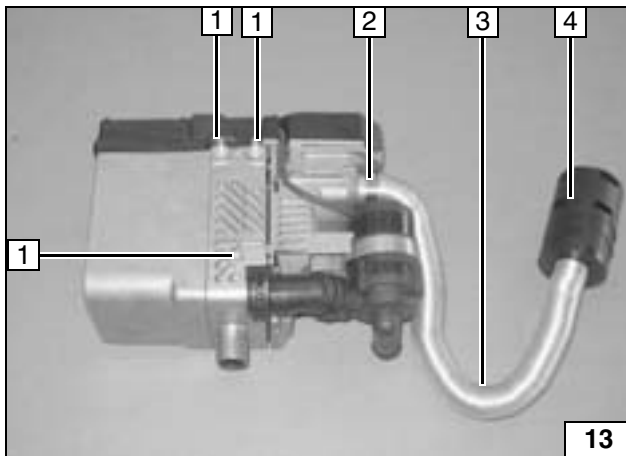
### Preparing the Heater Unit

- 1 Exhaust pipe  
a = 370mm
- 2 Exhaust end section  
b = 110mm

Dispose of section X



Preparing the exhaust pipe

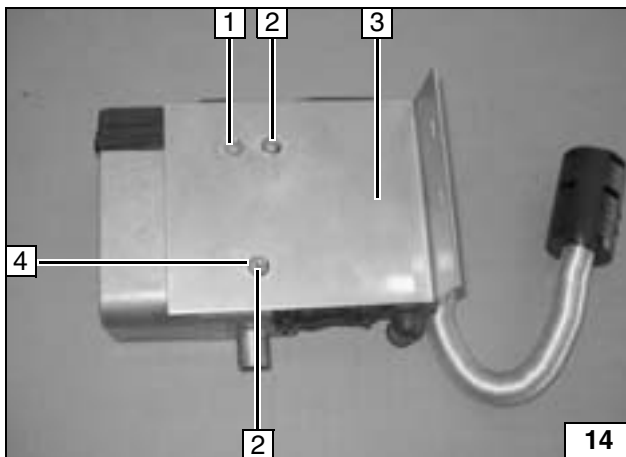


Ejot screw bolts tightening torque 10 Nm!

- 1 Ejot screw bolts [3x]
- 3 Combustion air intake pipe
- 4 Intake silencer
- 2 Ø 27 mm hose clamp



Preassembling the heater unit

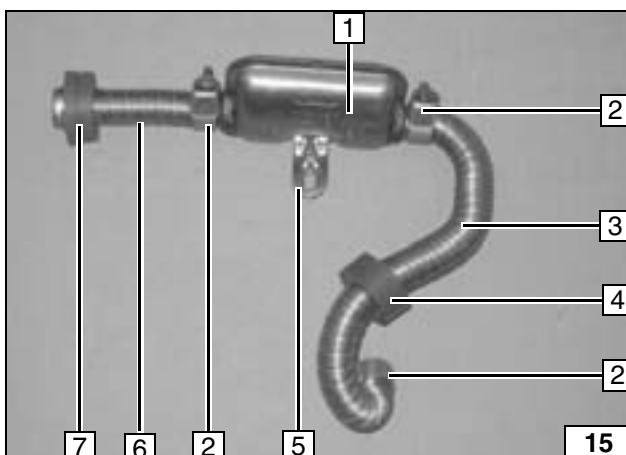


Ejot screw bolts tightening torque 10 Nm!  
Insert two washers between the heater unit and the bracket in position 4.  
The flanged nut M6 1 will be screwed later.

- 3 bracket
- 2 M6 flanged nuts [2x]



Preassembling the heater unit

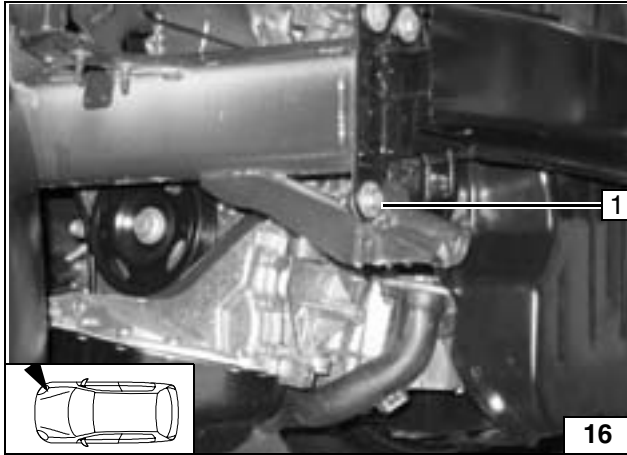
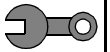


Assemble the exhaust lines according to the illustration and shape.

- 1 Exhaust silencer
- 3 Exhaust pipe
- 2 Hose clamps [3x]
- 4 Red (rt) rubber profile
- 5 Bracket, M6x20 bolt, flanged nut M6
- 6 Exhaust end section
- 7 Red (rt) rubber profile with groove



Preassembling the exhaust pipe

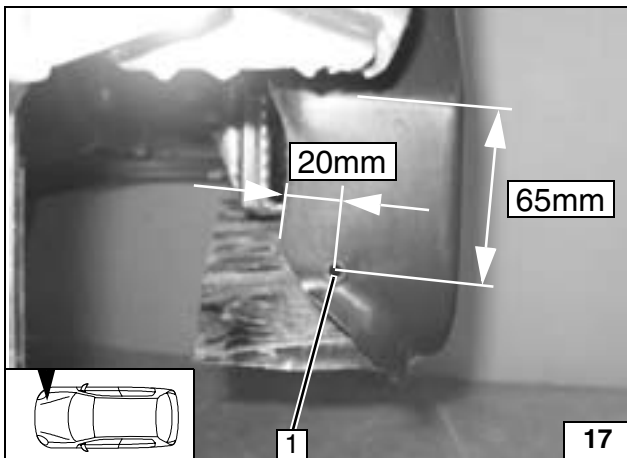


### Preparing the Installation Location

Remove original vehicle bolt 1, this will be used again.



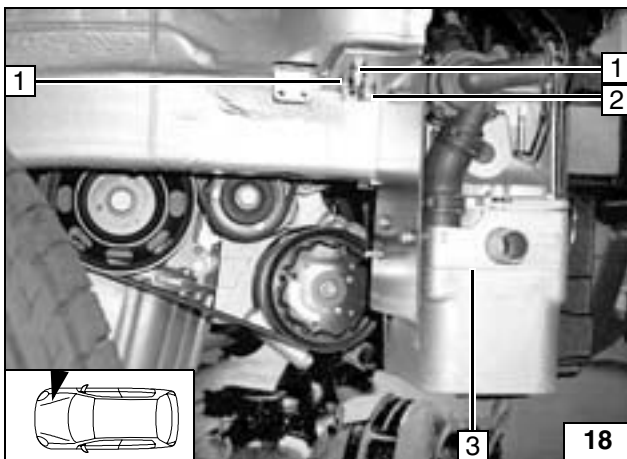
Preparing the Installation Location



Drill a Ø 6mm bore hole 1 according to the figure for the air intake silencer bracket. Check first for any wires!



Preparing the Installation Location



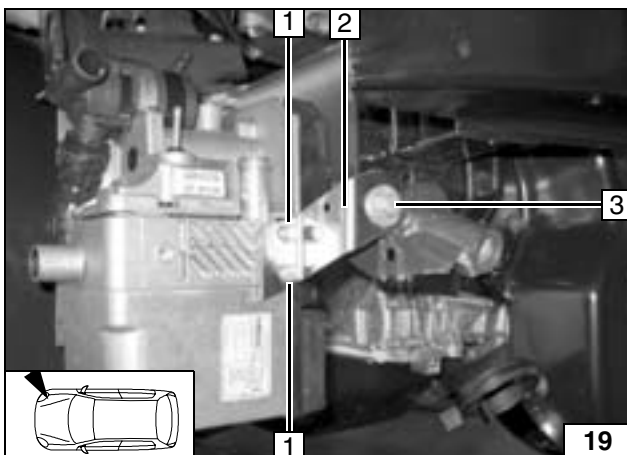
### Installing the Heater Unit

Insert 5mm spacer sleeve [2x] between the bracket and the body at position 1.

- 3 Preassembled Heater Unit
- 1 M6 flanged nuts [2x]
- 2 M8x30 bolt, spring washer on the original vehicle threaded bore hole (secure from above with the M8 nut)



Assembling the heater unit

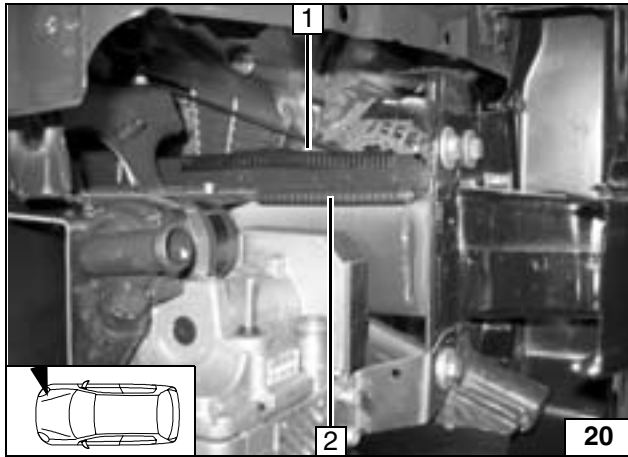
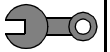


Eject screw bolts tightening torque 10 Nm!

- 2 Strut
- 1 Eject screw bolt [2x]
- 3 Original vehicle bolt



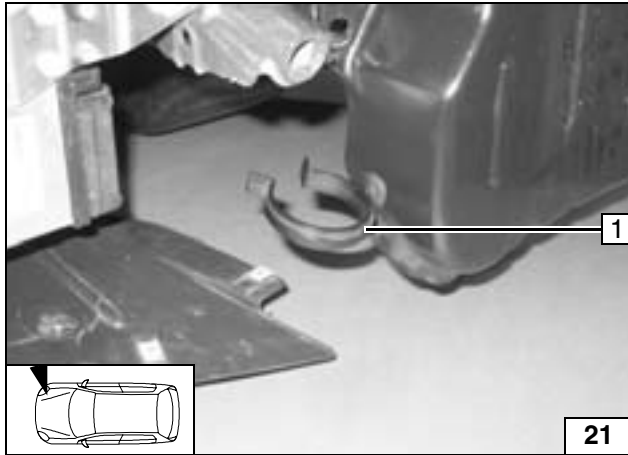
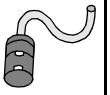
Assembling the heater unit



- 1 Edge protection 200 mm long
- 2 Edge protection 100mm long



**Inserting  
edge  
protection**

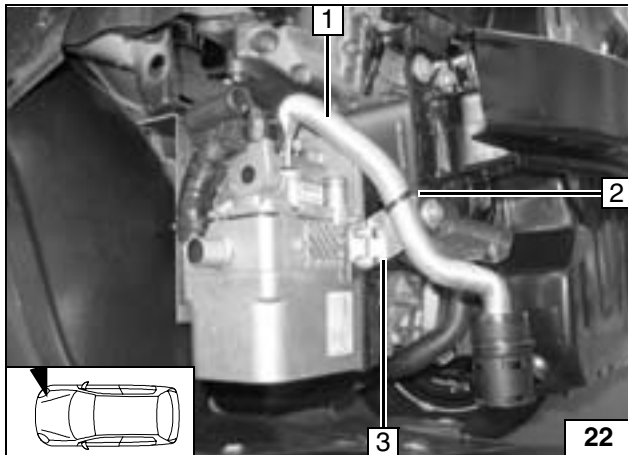


**Combustion Air**

Insert retaining clip **1** in the  $\varnothing$  6mm bore hole according to the figure.



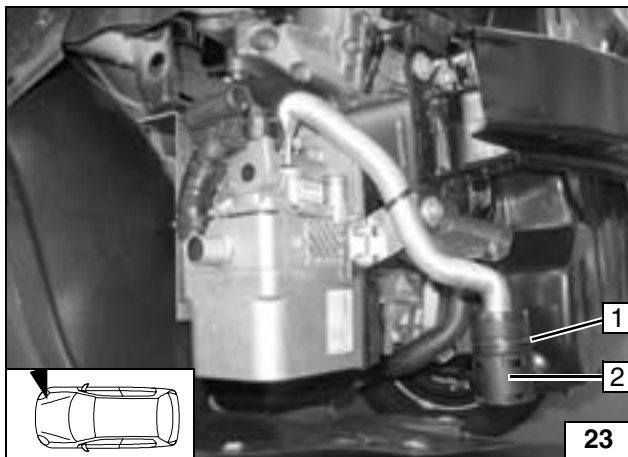
**Inserting retaining clip**



Fasten the combustion air intake silencer **1** to the hole in the strut **3** with cable ties **2**.



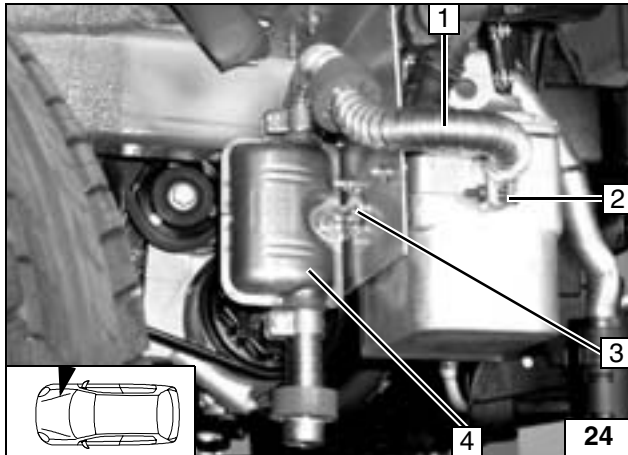
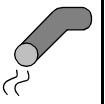
**Assembling the vacuum line**



Insert intake silencer **2** in the preassembled retaining clip **1**.



**Assembling the silencer**



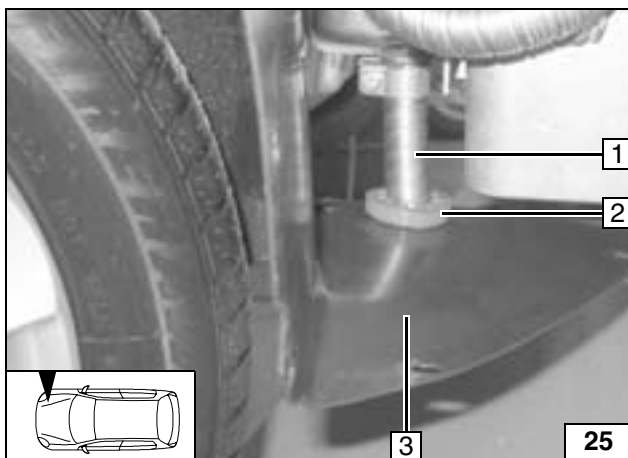
### Exhaust System

Ensure sufficient distance from adjacent components.

- 1 Pre-assembled exhaust pipe
- 2 Tighten the hose clamp
- 3 Bracket, M6 bolt on pre-assembled Ejot stay bolt
- 4 Exhaust silencer



**Assembling the exhaust pipe**

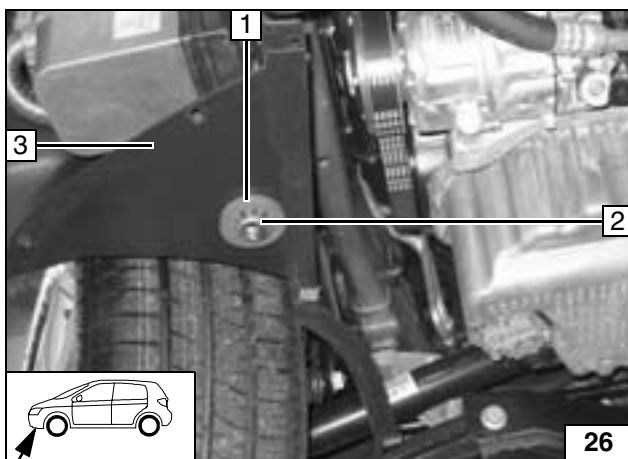


Ensure sufficient distance from adjacent components.  
Drill a Ø 42mm bore hole according to the figure.

- 1 Exhaust end section
- 2 Ø 42mm bore hole, red rubber profile with nut
- 3 Right wheel-house panel



**Inserting rubber profile**



Align the red (rt) rubber profile according to the figure.

- 3 Wheel-house panel
- 1 Red (rt) rubber profile with groove
- 2 Exhaust end section



**Inserting rubber profile**



## Water Connection

### WARNING!

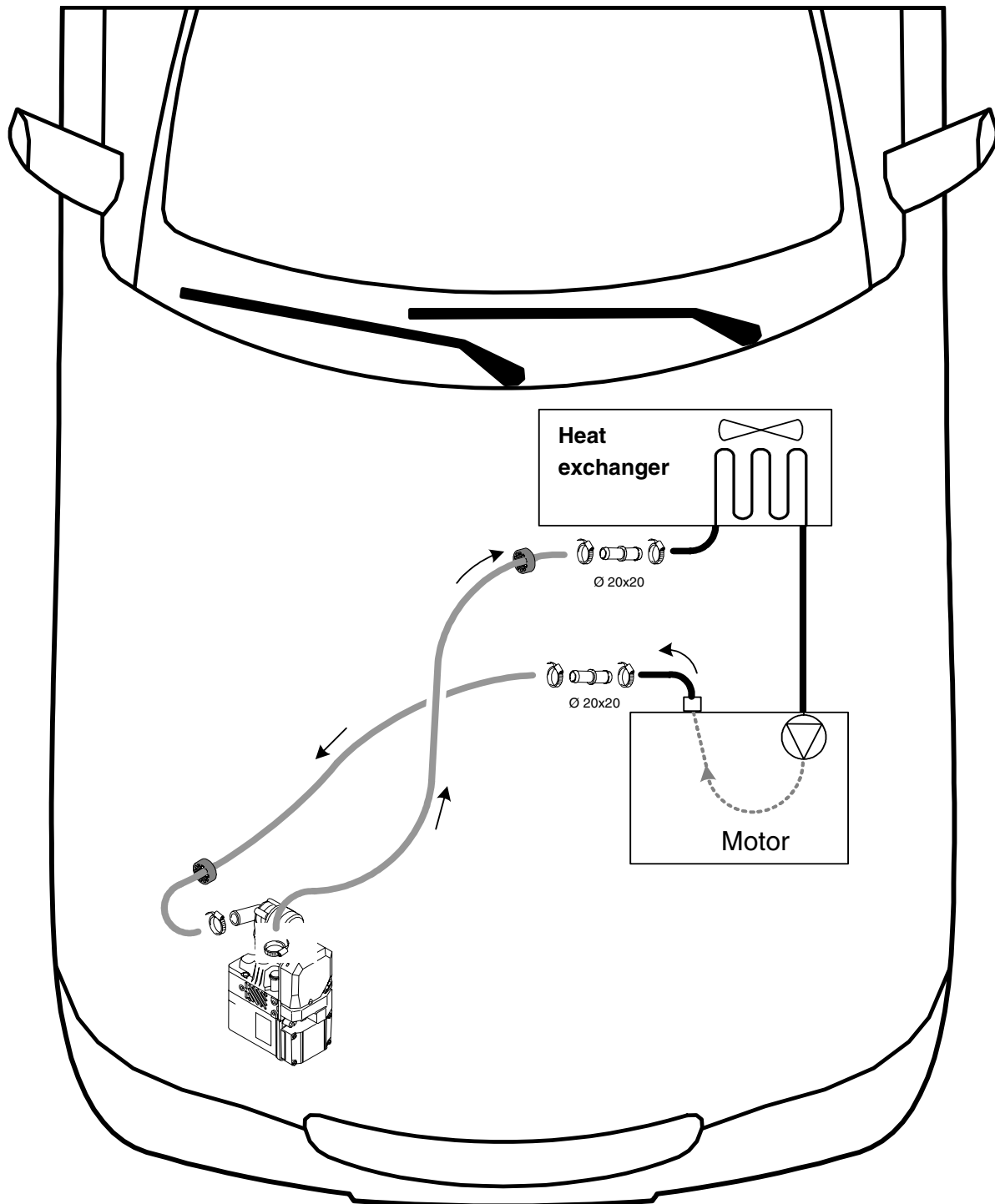
Tighten all hose clamps with  $2.0 + 0.5$  Nm.

Any coolant running off should be collected using an appropriate container.

Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable clips.

Position hose clamps and spring band clamps so that no other hose can be damaged.

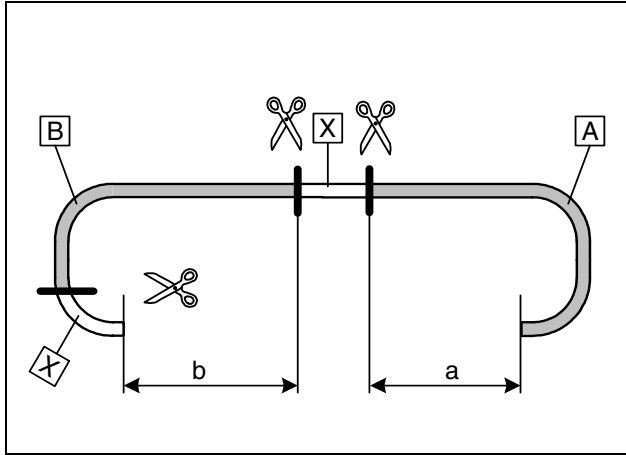
The connection should be "inline" based on the following diagram:



Water installation diagram

All undesignated clamps are  $\text{Ø } 20\text{-}27$  mm hose clamps.  
All connecting pipes =  $\text{Ø } 20 \times 20$ .



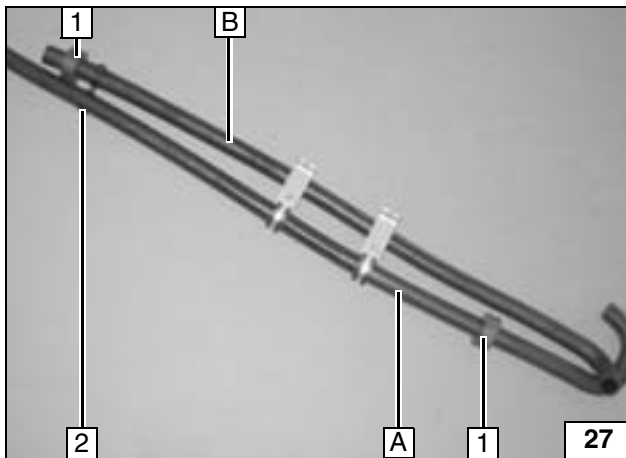


a = 1,010mm  
b = 820mm

Dispose of section X



Cutting water hose into sections

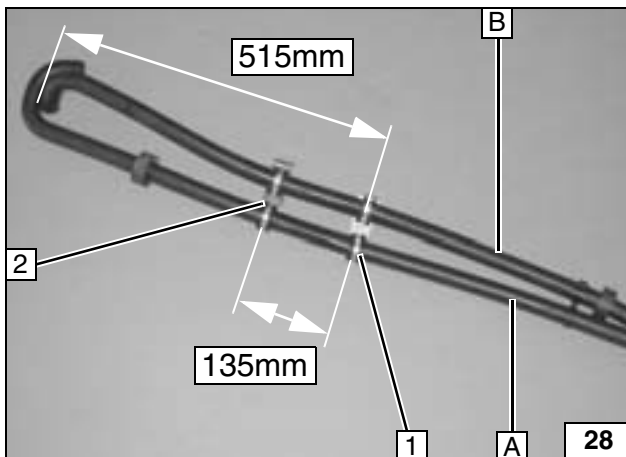


Prepare the water hoses according to the illustration

- 1 Black (sw) rubber profile [2x]
- 2 Hose bracket



Preparing the water hoses

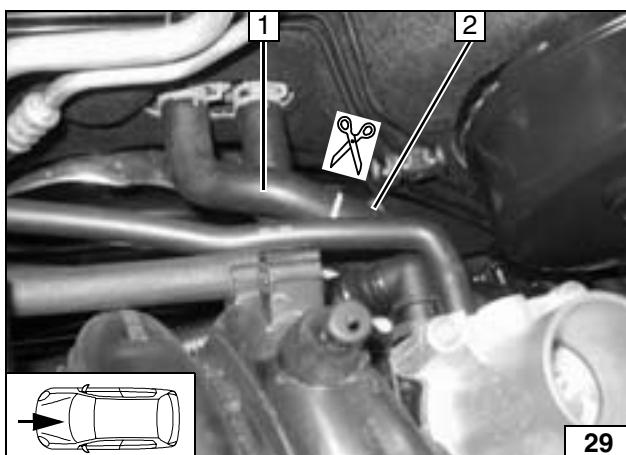


Assemble the bracket 1 and 2 according to the illustration.  
(see also illustration 27)

- 1 Bracket, rubber tube shaft Ø 29mm [2x], M6x20 bolt, flanged nut
- 2 Bracket, rubber tube shaft Ø 29mm [2x], M6x20 bolt, flanged nut



Preparing the water hoses



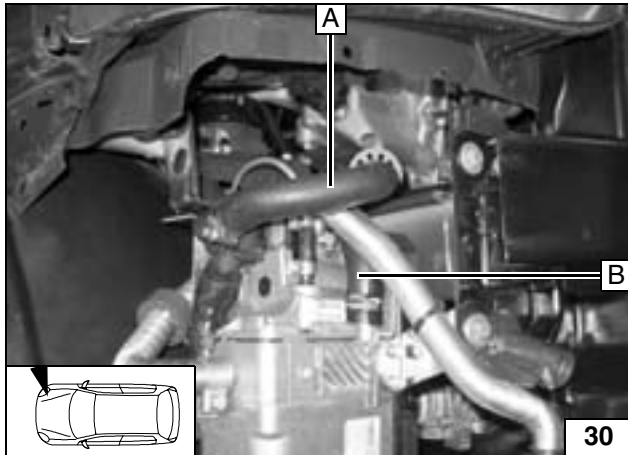
Turn the heat exchanger inlet hose section to the right after separating it.

- 1 Hose section to the heat exchanger inlet
- 2 Hose section from engine outlet



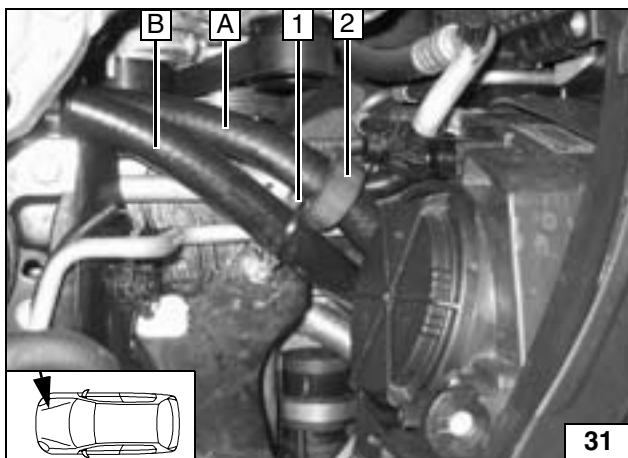
Splitting point





30

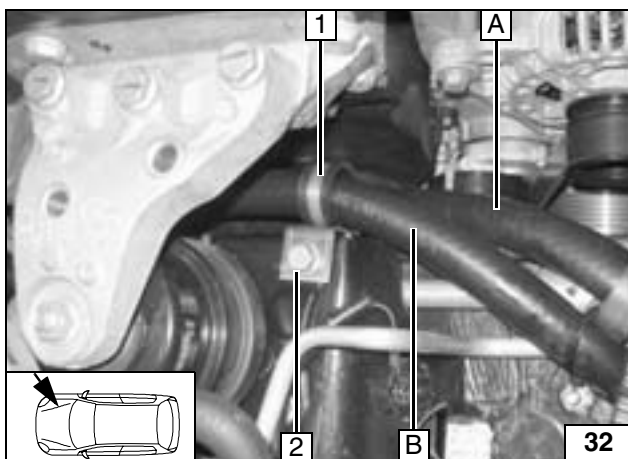
Connecting to the heater unit



31

- 1 Cable clip
- 2 Position the black (sw) rubber profile

Placement in the engine compartment



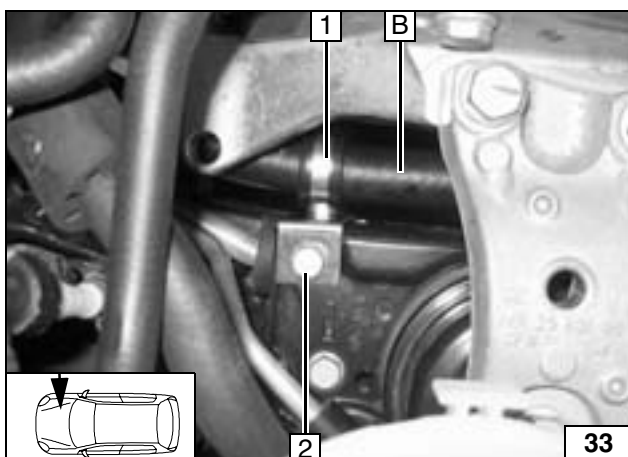
32

Align the pre-assembled bracket **1** according to the illustration.  
 Note the manufactures recommendations for the torque to screw on the on the engine bearing bracket.  
 Check that these rotate freely.



- 2 Original vehicle bolt, engine bearing bracket.

Installing in the engine compartment



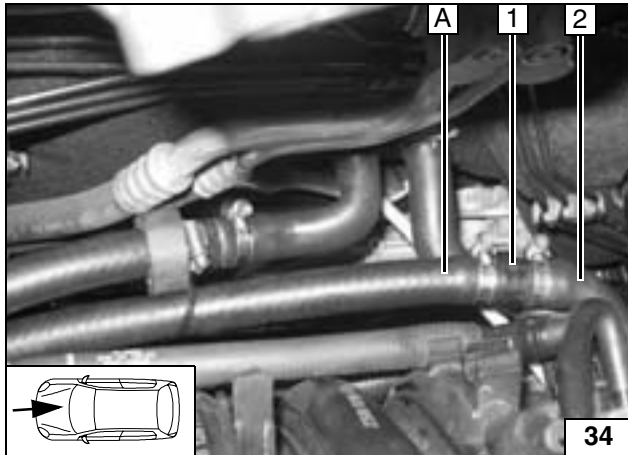
33

Align the pre-assembled bracket **1** according to the illustration.  
 Note the manufactures recommendations for the torque to screw on the on the engine bearing bracket.  
 Check that these rotate freely.



- 2 Original vehicle bolt, engine bearing bracket.

Installing in the engine compartment

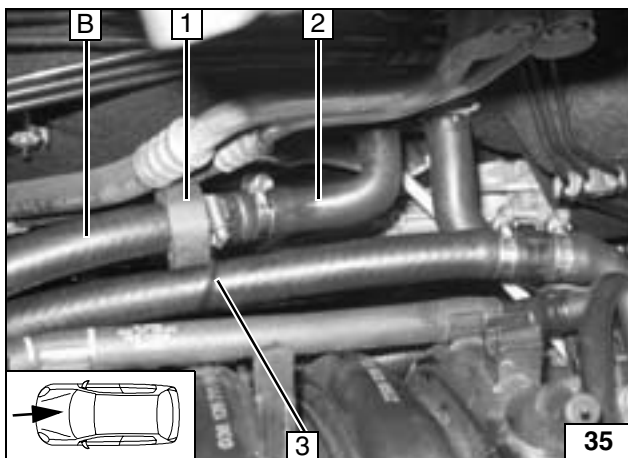


Insert the hose bracket **1** as shown in the figure.

**2** Engine exhaust hose section



**Connecting to the engine outlet**

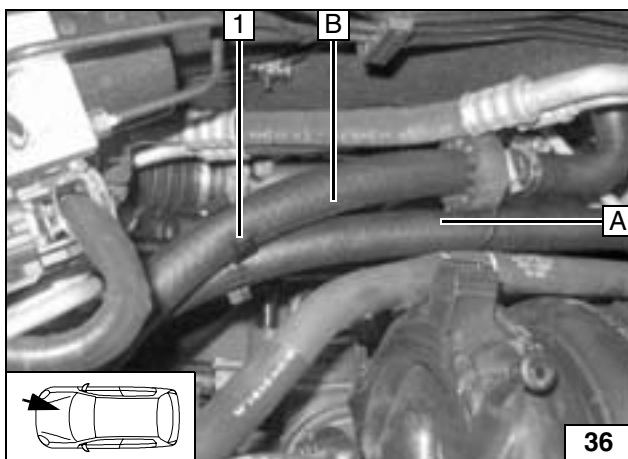


Before connecting, fill the water hoses with coolant.  
Align the black (sw) rubber profile **1** according to the illustration.

**2** Heat exchanger inlet hose section  
**3** Cable clips



**Connecting to the heat exchanger inlet**



Check that these rotate freely.  
Align the hose bracket **1** as shown in the illustration.



**Inserting the hose bracket**



## Fuel Connection

### CAUTION!

Open the vehicle's tank-cap lock, ventilate the tank and then re-close the tank lock.

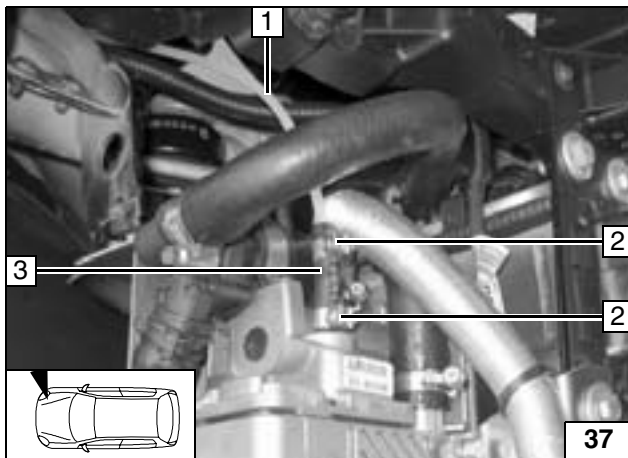
Catch any fuel running off with an appropriate container.

Install fuel line and metering pump cable harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable clips.

Fit the fuel line and cable harness with edge protectors around sharp edges.

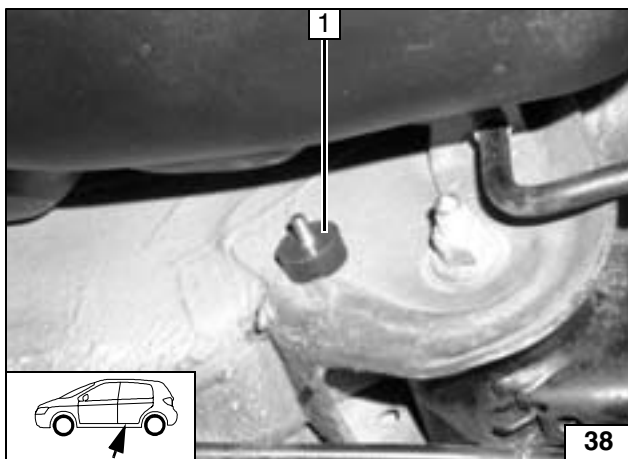
### WARNING!

The fuel line and cable harness to the metering pump should be installed based on the cable harness installation diagram.



- 1 Mecanyl fuel line
- 2 Ø 10mm hose clamps [2x]
- 3 Hose section

Connecting to the heater unit

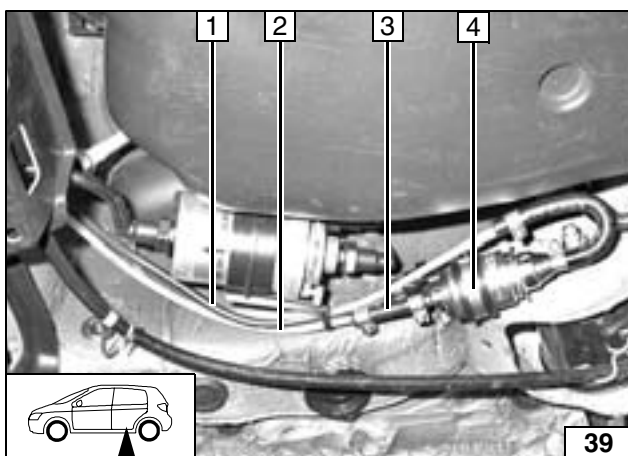


Assemble the silent block **1** according to the illustration.

- 1 Silent block, original vehicle hole, body washer, M6 flanged nut



Metering pump installation location

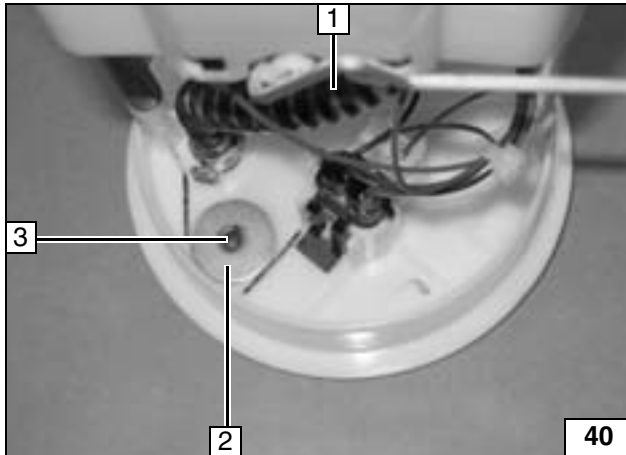


Note the installation position of the metering pump, see the Installation Instructions. Fuel line from the heater unit on the pressure side of the metering pump [side with connector].

- 1 Metering pump cable harness
- 2 Fuel line from the heater unit
- 3 Hose section, Ø 10 mm hose clamps [2x]
- 4 Metering pump; rubberized tube clamp; flanged nut



Metering pump installation location

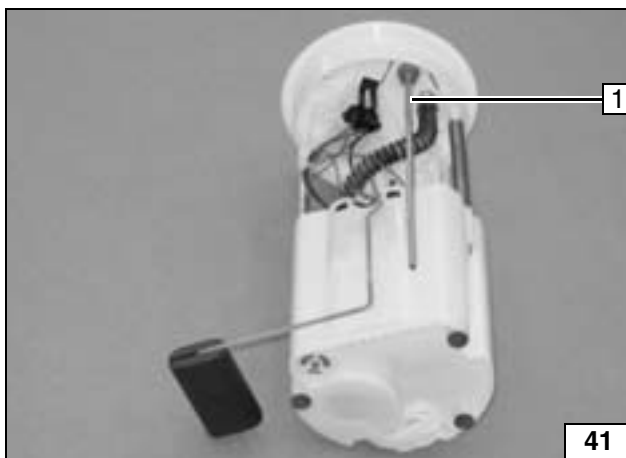


Remove the tank mounting **1** according to the manufacturer's instructions.

- 1 Tank mounting
- 2 Body washer Ø 6 mm
- 3 Copy the hole image, Ø 6mm bore hole



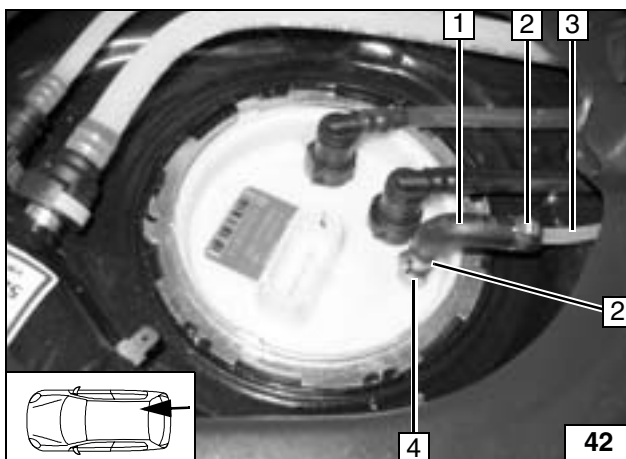
Fuel take-off



Cut the tank extracting device **1** into sections and insert according to the template, see the Installation Instructions.



Assembling the tank extracting device

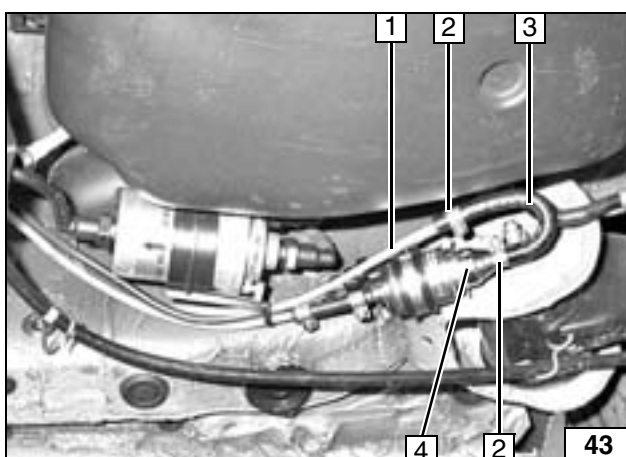


Assemble tank mounting according to manufacturer's instructions.

- 4 Tank extracting device
- 1 90° moulded hose
- 3 Residual section of Mecanyl fuel line to the metering pump
- 2 Ø 10mm universal clips [2x]



Connecting to the metering pump

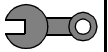


Fuel line from the tank extracting device **1** on the intake side of the metering pump **4** [side without connector]. Check the position of the components; adjust if necessary. Check that these rotate freely.

- 3 180°-moulded hose
- 2 Ø 10mm hose clamps [2x]



Fuel take-off



## Final Work

### WARNING!

Reassemble disassembled components in reverse order.

Check that all hose lines, hose, spring band clamps and universal clips, and all electrical connections are securely fastened.

Secure all loose lines using cable clip.

Only use manufacturer-approved coolant.

Spray heating unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect battery.
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Set the time switch.
- Set the air conditioning control according to the "Operating instructions for the end customer".
- Check that the auxiliary heating operates properly, see operating instructions / installation instructions.
- Attach the "Switch off auxiliary heating before re-fuelling" sticker onto the left side of the B-pillar.



# Webasto

*Feel the drive*

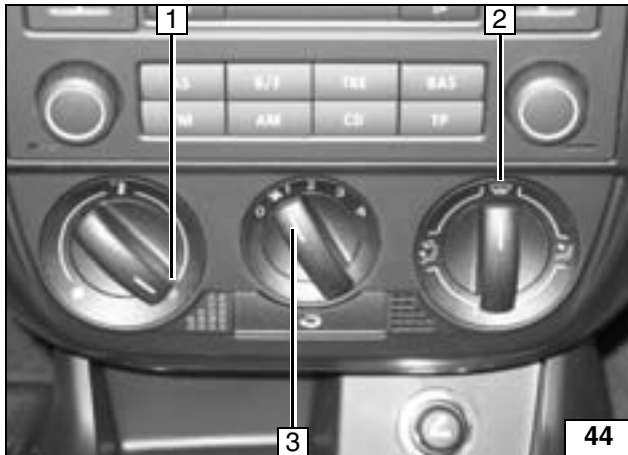
Webasto AG  
Postfach 80 - 82132 Stockdorf - Hotline 0 18 05 / 93 22 78  
Hotfax (0395) 55 92-353 - <http://www.webasto.de>

**Operating instructions for the end customer**

Please remove page and add to the vehicle operating instructions.



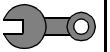
Before parking the vehicle, make the following settings:



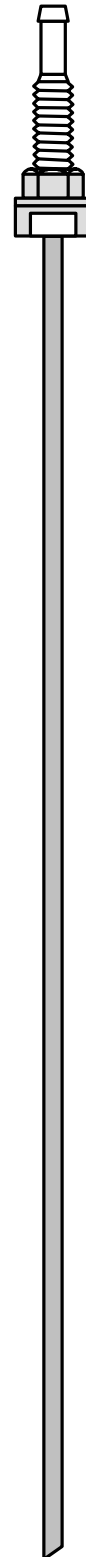
- 1 Temperature to "max."
- 2 Air outlet to "windscreen"
- 3 Blower set to level "1" or "2"

For vehicles with and without Climatic automatic air conditioning

**Rule of thumb for operating the auxiliary heating: driving time = heating time.**



## Tank Extracting Device Template



100 mm



Scale 1:1

Compare the size of the printed version with dimension lines.  
Permitted tolerance a maximum of 2%.

Set the printer settings to "no margin" or "minimize margins"  
and 100% of the normal size.

100 mm

0